

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 05-200127

(43)Date of publication of application : 10.08.1993

(51)Int. Cl.

A62C 3/00

A62C 2/10

A62C 35/11

(21)Application number : 04-042455

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(22)Date of filing : 28.01.1992

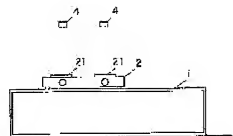
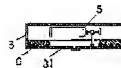
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## (54) EXTINGUISHER FOR GAS STOVE, ETC.

### (57)Abstract:

PURPOSE: To provide an apparatus which detects a flame to extinguish automatically when oil or the like in a pan catches a fire on a gas stove or the like.

CONSTITUTION: A partition screen 6 is formed in a cylinder which is slightly larger than the shape of the outer circumference of a pot on a gas stove 2 and long just to let the lower end thereof reach the gas stove 2. An extinguishing unit holding the partition screen and an extinguishing agent jetting cylinder 5 into a housing is mounted right on the gas stove 2 and made to communicate with a flame detection sensor 4. The partition screen 6 hangs down by a detection output from the flame detection sensor 4 to wrap a flame rising from the gas stove while an extinguishing agent is jetted from the extinguishing agent jetting cylinder 5 to extinguish the fire.



[Claim(s)]

[Claim 1] peripheral shape of a pan etc. which are hung on a gas range -- \*\*\*\*\* -- it being the fire-extinguishing unit dedicated to housing, and a partition film formed in tubed [ of the length of a grade to which it is large and the lower end reaches a gas range ], and an extinguishing-media jet cylinder, Fire extinguisher systems, such as a gas range \*\*\*\*(ing) a flame which makes a partition film hang and goes up from a gas range when attaching right above a \*\*\*\* gas range and trying to extinguish fire of a gas range, and being a thing which makes extinguishing media inject from an extinguishing-media jet cylinder.

[Claim 2] Fire extinguisher systems, such as a gas range etc. of claim 1 forming a partition film using a noncombustible or fire-resistant cloth material and reticulated material.

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the device which extinguishes the fire automatically, when fire spreads into a pan during cooking with cooking apparatus, such as a gas range and a gas table, and an oil etc. blaze up.

[0002]

[Description of the Prior Art] At home, since a telephone call is got or there is a visitor while frying tempura, a fry, etc. by the gas range etc., it separates from a gas range on the way in many cases. In such a case, since the person of \*\*\*\*\* does not stop gas, by the time the person returns to a gas range again, the oil in a pan will be overheated, fire spreads to this and he may begin to burn with it. When having hung the oil on fire noting that I will mix a hardening agent with a used oil in a similar manner in recent years, the accident which fire spreads to this and begins to burn with it is increasing. When fire spreads into a pan by such a gas range etc. and an oil etc. blaze up, big cloth like a sheet is wet and the method of putting this on a pan and extinguishing the fire is recommended.

[0003]

[Problem(s) to be Solved by the Invention] by intercepting supply of oxygen to an oil, the fire extinguishing method using the above-mentioned cloth is \*\* about fire, and effective as a method of extinguishing the fire of an oil. However, when the oil of a pan blazes up by a gas range etc. actually, Since the danger of a flame going up even to a height of not less than hundreds of mm, and burning and moving to a wall or a ceiling is high, Even if it equips a kitchen with the cloth for predetermined fire extinguishing, it will be very difficult to take out and wet the cloth, without being frightened to death in any way in such a case, and it will be very difficult to cover with cloth the pan which is standing as for a flame and is going up. And since two or more craters are shown in a gas range or a gas table, and the pan of cooking is usually hung also on everything but the pan and tableware and other kitchen utensils are put on the surroundings of it, \*\*\*\*\* is impossible for putting cloth on the pan in which the oil blazed up, and intercepting supply of oxygen to an oil. An object of this invention is to provide the device which detects it and extinguishes fire automatically, when the oil in a pan, etc. burn by a gas range etc.

[0004]

[Means for Solving the Problem] peripheral shape of a pan in which this invention is hung on a gas range

-- \*\*\*\*\* -- it being large and, Right above a gas range, attach a fire-extinguishing unit which dedicated a partition film which the lower end formed in tubed [ of the length of a grade which reaches a gas range ], and an extinguishing-media jet cylinder to housing, and this is connected to a flame detecting sensor, A flame which makes a partition film hang and goes up from a gas range by a detecting output from a flame detecting sensor is \*\*\*\*(ed), and the purpose above-mentioned by constituting so that extinguishing media may be made to inject from an extinguishing-media jet cylinder and the fire may be extinguished is attained. It can also be considered as an example which uses together a mechanism in which a fire-extinguishing unit is operated by manual operation, to a flame detecting sensor.

[0005]

[Function]In this invention, when the oil in a pan, etc. burn by a gas range etc., the partition film formed using a noncombustible or fire-resistant cloth material and reticulated material is made to hang, and a flame is \*\*\*\*(ed).

Therefore, the wall and a risk of burning in addition to this and moving of a kitchen are canceled for fire. The extinguishing media injected by this from an extinguishing-media jet cylinder dispersing, or being blown and turned down by a flame is lost, and extinguishing media divide, it is full in a film, and the effect is demonstrated certainly.

[0006]

[Example]Hereafter, the fire extinguisher system concerning this invention is concretely explained based on an example applied to the gas range. Drawing 1 shows the state where the fire extinguisher system was attached to the upper position of a gas range, and, as for the numerals 1 in a figure, as for a kitchen counter and 2, a fire-extinguishing unit and 4 are flame detecting sensors a gas range and 3. Although the gas range 2 does not carry out a graphic display, if it has the empty-bathtub-heating-prevention mechanism and the fire-extinguishing mechanism same in \*\*\*\* and it receives the detecting output from the flame detecting sensor 4, jet of gas will be stopped automatically.

Except it, it can be the same as that of this usual kind of gas range, two pieces thru/or the four craters 21 can be formed, a tempura pan and the pan for other cookings can be hung on each, and two or more dishes can be simultaneously cooked now.

It divides with the extinguishing-media jet cylinder 5, and the fire-extinguishing unit 3 comprises the film 6.

It is used attaching right above the gas range 2.

The extinguishing-media jet cylinder 5 turns the jet nozzle 51 of extinguishing media to the gas range 2, is attached to the housing of the fire-extinguishing unit 3, and injects extinguishing media toward the origin of a fire of the gas range 2. the peripheral shape of the pan etc. in which the partition film 6 is hung on the gas range 2 -- mist -- it is formed in tubed [ \*\*\*\*\* ].

Direct or moderate length hangs the end of one of these in housing, and it is attached by the string 61. Using a noncombustible or fire-resistant cloth material and reticulated material, this partition film 6 is formed in the length of the grade to which that lower end reaches the gas range 2, when it hangs down from housing.

Usually, it is folded up and stopped by the housing of the fire-extinguishing unit 3.

And if a stop is canceled, will \*\*\*\* the flame which hangs down from housing and goes up from the gas range 2, and fire will abolish the wall and a risk of burning in addition to this and moving of a kitchen, and \*\*\*\*\* and its effect are certainly demonstrated for scattering of the extinguishing media injected

from the extinguishing-media jet cylinder 5. The flame detecting sensor 4 detects it, when a flame goes up from the pan hung on the gas range 2 to the height more than fixed.

The gas range 2 and the fire-extinguishing unit 3 are connected with, tell a detecting output to the gas range 2, and a gas cock is made to be rebuked, and this output is told to the fire-extinguishing unit 3, and this is operated.

In the example shown in a figure, as for the fire-extinguishing unit 3, the bottom of housing is the double-doors-opening-outward door 31.

If the jet nozzle 51 of the extinguishing-media jet cylinder 5 is closed by this door 31 and the door 31 can open, the jet nozzle 51 will open and extinguishing media will be injected.

If the partition film 6 is also supported by this door 31 and the door 31 can open it, it will hang down from housing. And if the locking mechanism which the double-doors-opening-outward door 31 of this housing does not illustrate is connected to the flame detecting sensor 4 and a detecting output is told from the detecting sensor 4, a lock will be canceled and the door 31 will open.

[0007]

[Effect of the Invention]the peripheral shape of the pan hung on a gas range in this invention as explained in full detail above -- \*\*\*\*\* -- it being large and, When the fire-extinguishing unit which dedicated the partition film which the lower end formed in tubed [ of the length of a grade which reaches a gas range ], and the extinguishing-media jet cylinder to housing is attached right above a gas range and the oil in a pan, etc. burn by a gas range etc., Make a partition film hang, and a flame is \*\*\*\*(ed), and extinguishing media are injected towards a flame.

Therefore, since the wall and a risk of burning in addition to this and moving of a kitchen are canceled, fire moreover feels easy by it and he can perform extinction work by having formed the partition film using a noncombustible or fire-resistant cloth material and reticulated material, it is effective in generating of a secondary disaster being prevented.

Since it divides without the extinguishing media injected from an extinguishing-media jet cylinder by having \*\*\*\*(ed) the flame with the partition film dispersing, or being blown and turned down by the flame and is full in a film, the fire-extinguishing effect is demonstrated certainly.

#### [Brief Description of the Drawings]

[Drawing 1]It is a front view showing one example of the fire extinguisher system concerning this invention.

[Drawing 2]It is a front view showing the operating state of the fire extinguisher system concerning this invention.

#### [Description of Notations]

- 1 Kitchen counter
- 2 Gas range
- 3 Fire-extinguishing unit
- 4 Flame detecting sensor
- 5 Extinguishing-media jet cylinder
- 6 Partition film
- 21 Crater

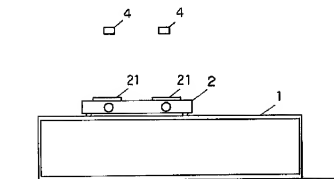
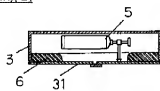
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31 Door

51 Jet nozzle

61 Hang and he is a string.

[Drawing 1]



[Drawing 2]

